

**IN THE CLAIMS:**

Please cancel claims 23, 24, 29, 31 and 32 without prejudice or disclaimer, add new claims 33 and 34, and amend claims 17, 18, 20-22, 25-28 and 30, as shown below in the detailed listing of all claims which are, or were, in the application.

Claims 1-16 (canceled)

17. (Currently amended) A bioaffinity assay for quantitative determination in a person's sample of free PAPP-A, defined as ~~the~~ pregnancy associated plasma protein A (PAPP-A) that is not complexed to ~~the~~ a proform of major basic protein (proMBP), wherein an amount of free PAPP-A present in said sample is determined either

i) by exposing said sample to a first binder which binds total PAPP-A and to a second binder which binds only PAPP-A complexed to proMBP and detecting said first and second binders, and calculating the ~~as a calculated~~ difference between measured total PAPP-A and measured PAPP-A complexed to proMBP, or

ii) by a direct bioaffinity assay measuring only free PAPP-A, by making PAPP-A complexed to proMBP non-capable of participating

in the bioaffinity reaction in which said sample is exposed to a binder which binds total PAPP-A.

18. (Currently amended) The assay according to claim 17, wherein free PAPP-A is determined according to alternative i) and two assays are performed, in which one aliquot of the sample is exposed to a first binder which binds total PAPP-A and the first binder is detected, and another aliquot of said sample is exposed to a second binder which binds only PAPP-A complexed to proMBP and the second binder is detected, and the amount of free PAPP-A is calculated as a difference between determined total PAPP-A and PAPP-A complexed to proMBP.

19. (Previously presented) The assay according to claim 18, wherein the assays are non-competitive sandwich assays.

20. (Currently amended) The assay according to claim 19, wherein the first and second binders are capture binders.

21. (Currently amended) The assay according to claim 19, wherein the first and second binders are labelled binders.

22. (Currently amended) The assay according to claim 17, wherein free PAPP-A is determined according to alternative i) as one single dual analyte assay where the sample is exposed to a capture binder, which binds total PAPP-A, and to two detecting binders labelled with different labels, so that ~~the~~ a first detecting binder labelled with ~~the~~ a first label is directed to an epitope present in any PAPP-A molecule, where the signal of the first label is used to give total PAPP-A, and ~~the~~ a second detecting binder labelled with ~~the~~ a second label is directed to an epitope in ~~the~~ a proMBP subunit of the PAPP-A molecule, where the signal of the second label is used to give PAPP-A complexed to proMBP.

23. (Canceled)

24. (Canceled)

25. (Currently amended) The assay according to ~~claim 24~~ claim 17, wherein PAPP-A complexed to proMBP is blocked or pre-adsorbed.

26. (Currently amended) The immunoassay according to ~~claim 18~~  
claim 17, wherein the binder is an antibody, an antibody fragment  
or an aptamer.

27. (Currently amended) A method for diagnosing an acute coronary  
syndrome in a person, comprising

making a comparison of an amount of a marker present in a  
sample derived from said person to a reference amount of said  
marker,

diagnosing whether said person is at risk of acute coronary  
syndrome based on said comparison,

wherein said marker is ~~by using as marker~~ either free PAPP-A,  
defined as pregnancy associated plasma protein A (PAPP-A) which is  
not complexed to a proform of major basic protein (proMBP), as such  
or said marker is a ratio

- free PAPP-A/total PAPP-A,
- free PAPP-A/PAPP-A complexed to proMBP, or
- PAPP-A complexed to proMBP/total PAPP-A.

28. (Currently amended) The method according to claim 27, wherein free PAPP-A is determined by a bioaffinity assay method for quantitative determination in a sample of free PAPP-A, either

i) as a calculated difference between measured total PAPP-A and measured PAPP-A complexed to proMBP, or

ii) by a direct bioaffinity assay measuring only free PAPP-A.

29. (Canceled)

30. (Currently amended) The method according to ~~claim 27~~ claim 28, wherein free PAPP-A is determined ~~by making PAPP-A complexed to proMBP non-capable of participating in the bioaffinity reaction in which the sample is exposed to a binder binding total PAPP-A according to alternative i) and two assay methods are performed, in which one aliquot of the sample is exposed to a first binder which binds total PAPP-A and said first binder is detected, and another aliquot of sample is exposed to a second binder which binds only PAPP-A complexed to proMBP and said second binder is detected, and the amount of free PAPP-A is caculated as a difference between determined total PAPP-A and PAPP-A complexed to proMBP.~~

31. (Canceled)

32. (Canceled)

33. (New) The method according to claim 30, wherein the assay methods are non-competitive sandwich assays.

34. (New) The method according to claim 33, wherein the first and second binders are either capture binders or labelled binders.